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WHAT IS CLAIMED IS:
CLAIMS

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1. Method for the in vitro preparation of starting materials for micropropagation and/or storage of germplasm, comprising the steps of:

a) contacting plant material with a micro-organism that induces fasciation and/or one or more fasciation-inducing factors derived from the micro-organism or derived from the infected and/or fasciated tissue;

b) developing leafy galls or shoot outgrows on the plant material; and

c) isolating the leafy galls or shoot outgrows as the starting materials.

2. Method for the in vitro micropropagation of plants, which method comprises the method as claimed in claim 1, further characterized by the steps of

d) eliminating or inactivating the micro-organism that induces fasciation and/or the one or more fasciation-related factors derived from the micro-organism or derived from the infected and/or fasciated tissue;

e) culturing the leafy gall or shoot outgrows in or on one or more suitable culture media to allow shoot and root development for obtaining plantlets; and

f) transferring the plantlets thus obtained, optionally after acclimatisation, to conventional growing conditions to obtain regenerated plants.

3. Method for the preservation of plants or germplasm, which method comprises the method as claimed in claim 1, further characterized by the step of storing the leafy galls or shoot outgrows under growth limiting conditions.

4. Method as claimed in claims 1-3, wherein the fasciation-inducing micro-organism is Rhodococcus fascians.

5. Method as claimed in claim 3 and 4, wherein the growth limiting conditions comprise low temperatures

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of about 4°C or cryo-conserving conditions, such as storage in liquid nitrogen.

6. Method as claimed in claims 1-5, wherein the plant material comprises explants, such as leaf discs, 5 organs, tissue fragments, seedlings, seeds, embryos, isolated cells, protoplasts, cell cultures and callus tissues.

7. Method as claimed in claims 1-6, wherein the plant material is material of species of the genera 10 Brassicaceae, Salicaceae, Compositae, Solanaceae, Scrophulariaceae, Liliaceae, Papaveraceae, Gramineae and Fabaceae.

8. Method for the in vitro micropropagation of plants, which method comprises the method of claim 3 and 15 optionally the subsequent removal or inactivation of still present micro-organisms that induce fasciation and/or fasciation related factors derived from the micro-organism or derived from the infected and/or fasciated tissue, culturing the leafy gall or shoot outgrows in or 20 on one or more suitable culture media to induce shoot and root development for obtaining plantlets, and transferring the plantlets thus obtained, optionally after acclimatisation, to conventional growing conditions to obtain regenerated plants.

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